



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,127	07/02/2003	Akira Kosaka	15162/05540	3902

24367 7590 01/24/2007
SIDLEY AUSTIN LLP
717 NORTH HARWOOD
SUITE 3400
DALLAS, TX 75201

EXAMINER

HANNETT, JAMES M

ART UNIT	PAPER NUMBER
----------	--------------

2622

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/612,127

Applicant(s)

KOSAKA ET AL.

Examiner

James M. Hannett

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16 and 17 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/2/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 7/2/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Camera that determines if a finger covers the objective lens of a camera during image capture.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

- 1: Claims 1, 2, 4-14, 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by the provided English translation of JP 05-095501 Hayashi et al.
- 2: As for Claim 1, Hayashi et al teaches in the constitution on page 1 of the translation an image capture apparatus (camera) comprising: an image generator (CCD, A/D converter, etc) for capturing a subject and generating image data; a discriminator for discriminating whether a part of a user (finger depicted in Figure 7) is included in an object area to be captured (field of view of the camera) or not on the basis of a plurality of pieces of image data (more than one pixel of image data) generated in a time series manner by the image generator (CCD, A/D converter, etc). Hayashi et al teaches in Paragraph [0010] that the image data output from the CCD is sent to an A/D converter and then to the processing circuit (9) and then the image data is used to determine if a users finger is in the frame of the image. Therefore, the data used to determine if the finger is

Art Unit: 2622

in the frame is generated in a time series manner by being captured, then A/D converted and then processed by processor (9). (Occurs serially in time). Hayashi et al teaches on Paragraph [0011] that when it is detected that the users finger covers the lens, the camera outputs a signal to warn the user that the finger covers the lens. Therefore, Hayashi et al teaches a controller for controlling operation of the image capturing apparatus (camera) on the basis of a result of discrimination of the discriminator.

3: In regards to Claim 2, Hayashi et al teaches in the abstract and depicts in Figures [7 and 10] the part of the user is a finger of the user.

4: As for Claim 4, Hayashi et al teaches on Paragraph [0011-0012] that when it is detected that the users finger covers the lens, the camera outputs a signal to warn the user that the finger covers the lens. Hayashi et al teaches that the method for indicating to the user that the finger covers the lens can include making an LED emit light in the finder of the camera or sounding a buzzer. Therefore, Hayashi et al teaches an indicator (LED or buzzer) for notifying the user, wherein the controller notifies (emits light from LED or sounds buzzer) the user of the result of discrimination by using the indicator (LED or buzzer) when the discriminator discriminates that the part of the user is included in the objective area (covers the lens).

5: In regards to Claim 5, Hayashi et al teaches on Paragraph [0010] an image processor (9) for generating image data to be recorded (in memory 12) from image data generated by the image generator (CCD, A/D converter, etc), wherein the controller (main CPU 13) controls the image processor (9) so as to generate the image data to be recorded (in memory 12). Hayashi et al teaches on Paragraph [0005] that the object of the invention is to provide a camera that does not waste memory space by capturing images that include the users finger covering the lens.

Art Unit: 2622

Therefore, this process of preventing images from being captured if the users finger covers the lens is a process for eliminating an area including the part of the user (finger) from the image generated by the image generator (CCD, A/D converter, etc) when the discriminator discriminates that the part of the user (finger) is included in the objective area (covers the lens).

6: As for Claim 6, Hayashi et al teaches in Paragraphs [0017 and 0018] that in the AE mode, the brightness of the pixels in the image are measured to determine if the users finger covers the lens. Hayashi et al teaches that if not areas of the image have remarkably low brightness areas it is determined that no finger covers the lens. Therefore, the discriminator discriminates whether the part of the user (finger) is included in the objective area (covers the lens) or not on the basis of a change in the position (the low brightness area is removed when the finger is removed this is a change in position of the finger) of a low brightness area in the plurality of pieces of image data (plurality of pixels).

7: In regards to Claim 7, Hayashi et al teaches in Paragraphs [0017 and 0018] that in the AE mode, the brightness of the pixels in the image are measured to determine if the users finger covers the lens. Hayashi et al teaches that if no areas of the image have remarkably low brightness areas, it is determined that no finger covers the lens. Therefore, the discriminator discriminates whether the part of the user (finger) is included in the objective area (covers the lens) or not on the basis of a change in the position (the low brightness area is removed when the finger is removed this is a change in position of the finger) of a low brightness area in the plurality of pieces of image data (plurality of pixels). Furthermore, Hayashi et al teaches in Paragraph [0019 and 0025] that the AE method can be used in conjunction with the AWB method which uses color (Hue information) to detect the location of the finger on the lens.

Art Unit: 2622

8: As for Claim 8, Hayashi et al teaches on Paragraph [0019] the AWB method uses the color information (hue information) to detect if the finger is present on the screen). Since the detected color (hue) used will be the detected color of the users finger, the detected color corresponds to the color of the users hand and is therefore the color of flesh.

9: In regards to Claim 9, Hayashi et al teaches on Paragraph [0014] a focusing lens (2), wherein the plurality of pieces of image data (data captured by CCD, A/D converted and processed by processor (9)) generated in a time-series manner while moving the position of the focusing lens.

10: As for Claim 10, Hayashi et al teaches on Paragraph [0014-0015] that the presence of the users finger can be detected using an AF method that extracts the high frequency components of the image and detects the presence of the finger based on a blurred image that lacks high frequency components (lacks contrast). Therefore, the discriminator discriminates whether or not the part of the user (finger) is included in the objective area (covers the lens) on the basis of a change in contrast (change in profile of high frequency components as depicted in Figures (3 and 4)) in a predetermined area in the plurality of pieces of image data (pixels of the image).

11: In regards to Claim 11, Hayashi et al depicts in Figure 7 the finger is located in the periphery region of the image. Furthermore, the examiner views the location of the finger as being located in a predetermined area since the finger is placed in that location prior to being detected by the camera.

12: As for Claim 12, Hayashi et al teaches on Paragraph [0014-0015] that the presence of the users finger can be detected using an AF method that extracts the high frequency components of the image and detects the presence of the finger based on a blurred image that lacks high

Art Unit: 2622

frequency components (lacks contrast). Therefore, the discriminator discriminates whether or not the part of the user (finger) is included in the objective area (covers the lens) on the basis of a change in contrast (change in profile of high frequency components as depicted in Figures (3 and 4)) in a predetermined area in the plurality of pieces of image data (pixels of the image).

Furthermore, Hayashi et al teaches in Paragraph [0019 and 0025] that the AF method can be used in conjunction with the AWB method which uses color (Hue information) to detect the location of the finger on the lens

13: In regards to Claim 13, Hayashi et al teaches on Paragraph [0019] the AWB method uses the color information (hue information) to detect if the finger is present on the screen). Since the detected color (hue) used will be the detected color of the users finger, the detected color corresponds to the color of the users hand and is therefore the color of flesh.

14: As for Claim 14, Hayashi et al teaches in Paragraph [0006] that the camera can prevent photography from occurring when the finger covers the lens. Therefore, the controller inhibits image capturing operation (prevents an image capture from occurring) of image data to be recorded when the discriminator discriminates that the part of the user is included in the object area.

15: In regards to Claim 16, Hayashi et al teaches in the constitution on Page [1] of the translation a method of capturing a subject (using a camera) and generating image data in a time series manner; Hayashi et al teaches in Paragraph [0010] that the image data output from the CCD is sent to an A/D converter and then to the processing circuit (9) and then the image data is used to determine if a users finger is in the frame of the image. Therefore, the data used to determine if the finger is in the frame is generated in a time series manner by being captured,

Art Unit: 2622

then A/D converted and then processed by processor (9). (Occurs serially in time).

Discriminating whether a part of a user (finger depicted in Figure 7) is included in an object area to be captured (field of view of the camera) or not on the basis of a plurality of pieces of image data (more than one pixel of image data) generated in a time-series manner; Hayashi et al teaches on Paragraph [0011] that when it is detected that the users finger covers the lens, the camera outputs a signal to warn the user that the finger covers the lens. Therefore, Hayashi et al teaches a controlling operation of the image capturing apparatus (camera) on the basis of a result of discrimination of the discriminator.

16: As for Claim 17, Hayashi et al teaches in the abstract and depicts in Figures [7 and 10] the part of the user is a finger of the user.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17: Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over The provided English translation of JP 05-095501 Hayashi et al.

18: As for Claim 3, Hayashi et al teaches in the constitution on Page [1] of the translation the discriminator discriminates whether the part of the user (finger) is included in the objective area (covers the lens) or not on the basis of the plurality of pieces of image data (plurality of pixels). However, Hayashi et al does not specifically teach that the camera has a display that will display the image to be captured prior to it being captured and stored into memory.

Art Unit: 2622

Official Notice is taken that it was well known in the art at the time the invention was made to provide digital cameras with LCD displays to enable the user of the camera to view a real-time image of the subject to be captured and allow the user to properly compose the image.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the camera of Hayashi et al with a LCD viewfinder display in order to allow a user to display the image to be captured before photographing in order to allow the user to properly compose the image.

Allowable Subject Matter

19: Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USPN 5,943,516 Uchiyama et al teaches the use of a camera that warns a user if the camera is being held inappropriately; USPN 5,815,750 Ishiguro teaches a camera that detects if a finger is obstructing the camera from taking a proper picture; USPN 4,547,054 Bridges teaches a camera that detects if a finger is covering the lens of the camera.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Hannett whose telephone number is 571-272-7309.


The examiner can normally be reached on 8:00 am to 5:00 pm M-F.

Art Unit: 2622

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on 571-272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James M. Hannett
Examiner
Art Unit 2622



JMH
January 22, 2007